

Appl. No. 10/038,341
Amtd. Dated January 20, 2006
Reply to Final Office action of December 30, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An apparatus comprising:
a collector inside a firewall to collect a message intended for an internal peer inside [[a]] the firewall via a gateway device at the firewall, the message being transmitted by an external peer outside the firewall, the internal peer being registered internally inside the firewall for an external communication across the firewall; and
a distributor coupled to the collector to distribute the message to the registered internal peer if there is a match in address information of the message and the registered internal peer.
2. (original) The apparatus of claim 1, further comprising:
a gateway interface to interface internally to the firewall to the gateway device.
3. (original) The apparatus of claim 2, wherein the gateway interface establishes a continuous connection to a relay server outside the firewall through tunneling.
4. (original) The apparatus of claim 3, wherein the collector registers to the relay server to act as an external contact point for the external peer.
5. (previously presented) The apparatus of claim 4, further comprising a registrar to register the internal peer for the external communication across the firewall, and wherein the collector polls the relay server for an incoming message for the registered internal peer using a single connection.
6. (original) The apparatus of claim 1, wherein the gateway device is one of a firewall and a network translation address (NAT) device.
7. (currently amended) The apparatus of claim 1, further comprising:

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a registrar to register the internal peer internally inside the firewall for the external communication across the firewall.

8. (previously presented) The apparatus of claim 7, wherein the collector polls the gateway device for an incoming message for the registered internal peer using a single connection.

9. (previously presented) The apparatus of claim 7, wherein the collector collects an internal message from the registered internal peer to be transmitted to the external peer.

10. (original) The apparatus of claim 9, wherein the distributor distributes the collected internal message to the external peer via the gateway device.

11. (currently amended) A method comprising:
collecting a message intended for an internal peer inside a firewall via a gateway device at the firewall, the message being transmitted by an external peer outside the firewall, the internal peer being registered internally inside the firewall for an external communication across the firewall; and

distributing the message to the registered internal peer if there is a match in address information of the message and the registered internal peer.

12. (original) The method of claim 11, further comprising:
interfacing internally to the firewall to the gateway device located at the firewall.

13. (original) The method of claim 12, wherein the interfacing comprises:
establishing a continuous connection to a relay server outside the firewall through tunneling.

14. (original) The method of claim 13, wherein the collecting comprises: registering to the relay server to act as an external contact point for the external peer.

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15. (currently amended) The method of claim 14, further comprising registering internally inside the firewall the internal peer for the external communication across the firewall, and polling the relay server for an incoming message for the registered internal peer using a single connection.

16. (original) The method of claim 11, wherein the interfacing to the gateway device comprises: interfacing to one of a firewall and a network translation address (NAT) device.

17. (previously presented) The method of claim 11, further comprising: registering the internal peer for the external communication across the firewall.

18. (previously presented) The method of claim 17, wherein the collecting comprises: polling the gateway device for an incoming message for the registered internal peer using a single connection.

19. (previously presented) The method of claim 17, wherein the collecting comprises: collecting an internal message from the registered internal peer to be transmitted to the external peer.

20. (original) The method of claim 19, wherein the distributing comprises: distributing the collected internal message to the external peer via the gateway device.

21. (currently amended) A system comprising:
a gateway device located at a firewall; and
an internal contact point located inside the firewall, the internal contact point comprising:
a collector to collect a message intended for an internal peer inside a firewall via
[[a]] the gateway device at the firewall, the message being transmitted by an external peer
outside the firewall, the internal peer being registered internally inside the firewall for an
external communication across the firewall; and

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a distributor coupled to the collector to distribute the message to the registered internal peer if there is a match in address information of the message and the registered internal peer.

22. (currently amended) The system of claim 21, wherein the internal contact point further comprising comprises:

a gateway interface to interface internally to the firewall to the gateway device.

23. (original) The system of claim 22, wherein the gateway interface establishes a continuous connection to a relay server outside the firewall through tunneling.

24. (original) The system of claim 23, wherein the collector registers to the relay server to act as an external contact point for the external peer.

25. (currently amended) The system of claim 24, wherein the internal contact point further comprising comprises a registrar to register the internal peer internally inside the firewall for the external communication across the firewall, and wherein the collector polls the relay server for an incoming message for the registered internal peer using a single connection.

26. (original) The system of claim 21, wherein the gateway device is one of a firewall and a network translation address (NAT) device.

27. (currently amended) The system of claim 21, wherein the internal contact point further comprising comprises:

a registrar to register the internal peer for the external communication across the firewall.

28. (previously presented) The system of claim 27, wherein the collector polls the gateway device for an incoming message for the registered internal peer using a single connection.

29. (previously presented) The system of claim 27, wherein the collector collects an internal message from the registered internal peer to be transmitted to the external peer.

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30. (original) The system of claim 29, wherein the distributor distributes the collected internal message to the external peer via the gateway device.

31. (currently amended) A gateway-device system comprising:
a firewall;
an internal peer inside the firewall;
a gateway device located at the firewall; and
an internal contact point located inside the firewall, the internal contact point comprising:
a collector to collect a message intended for ~~an~~ the internal peer ~~inside~~ inside a firewall
via ~~[[a]]~~ the gateway device ~~at the~~ inside the firewall, the message being transmitted by an external peer outside the firewall, the internal peer being registered internally inside the ~~inside~~ firewall
for an external communication across the firewall; and
a distributor coupled to the collector to distribute the message to the registered internal peer if there is a match in address information of the message and the registered internal peer.

32. (currently amended) The system of claim 31, wherein the internal contact point further comprising comprises:

a gateway interface to interface internally to the firewall to the gateway device.

33. (original) The system of claim 31, wherein the gateway device is one of a firewall and a network translation address (NAT) device.

34. (currently amended) The system of claim 31, wherein the internal contact point further comprising comprises:
a registrar to register the internal peer internally inside the ~~inside~~ firewall for the external communication across the firewall.

35. (original) The system of claim 31, further comprising: a relay server to interface to a number of external peers outside the firewall.